

What is claimed is:

1. A hard film formed of a material containing a $(M_{1-x}Si_x)(C_{1-d}N_d)$ compound, wherein M is at least one of elements in groups 3A, 4A, 5A and 6A and Al, $0.45 \leq x \leq 0.98$ and $0 \leq d \leq 1$, where x, 1-x, d and 1-d are atomic ratios of Si, M, N and C, respectively.

2. The hard film according to claim 1, wherein the material further contains O in an atomic ration in the range of 0.01 to 0.2.

3. The hard film according to claim 1, wherein diffraction peak half width of a (111)-plane of the $(M_{1-x}Si_x)(C_{1-d}N_d)$ compound measured by x-ray diffraction is 1.5° or above.

4. The hard film according to claim 1, wherein the element M is Cr, Ti or Zr.

5. A laminated hard film formed by alternately superposing the hard film according to claim 1, and a hard film formed of a material containing a $(M_{1-x}Si_x)(C_{1-d}N_d)$ compound at a stacking period in the range of 1 to 1000 nm,

wherein M is at least one of elements of groups 3A, 4A, 5A and 6A and Al, $0 \leq x \leq 0.45$ and $0 \leq d \leq 1$, where x, 1-x, d and 1-d are atomic ratios of Si, M, N and C, respectively.

6. A hard film formed of a material containing a $(M_{1-x}Si_x)(C_{1-d}N_d)$ compound on a substrate,

wherein M is at least one of elements of groups 3A, 4A, 5A and 6A and Al, the most inner portion of the hard film contiguous with the substrate meets $0 \leq x \leq 0.45$ and $0 \leq d \leq$

1, where x , $1-x$, d and $1-d$ are atomic ratios of Si, M, N and C, respectively, the most outer portion of the hard film meets $0.45 \leq x \leq 0.98$ and $0 \leq d \leq 1$, where x , $1-x$, d and $1-d$ are atomic ratios of Si, M, N and C, respectively, and outer portion of the hard film has higher Si atomic ratio x .